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V.—LUCRETIUS 5, 1006,

Improba navigii ratio tum caeca iacebat.

This verse of Lucretius was suspected by Pinzger prior to 1822 and has been generally rejected since Suerdsiö, 1832. Bockemüller, 1874, read *cum proba navigiis*, *navigiis* having been first proposed by Bothe and *navigium* by Osannus, both before 1828. Munro read *naucleri*, and *cum* for *tum*, the latter change having been made in the Brixienensis, Veronensis of 1486, and Venetian of 1495. Forbiger in his note on the verse (1828), and earlier in his dissertation (1824) defended the passage at length.

It is my purpose to examine in order the various objections of Suerdsiö as discussed by Lachmann.

1. The verse is said to be unnecessary, disturbing to the sense, and unconnected with the context. Lucretius is describing the development of human society. Death came *tum*, that is, in the early ages of the world, as it comes *nunc*, at present (988). Then, *tum* (990), wild beasts made prey of men, but the wild sea, the savage beast of the poet's time, and the demon war did not destroy men by the thousands (999-1001). The sea was baffled of its prey at the time he had in mind (*hic* 1002 = *tum*), nor did its alluring craft succeed in wooing men to their destruction with its cajoling waves (1005); then, *tum* (1006), the accursed art of navigation was unknown, the art that appealed to man's cupidity: mercator—reficit rates | quassas indocilis pauperiem pati (Hor. C. 1, 1, 17); dives et aureis | mercator exsiccat culullis, (id. 1, 31, 10); impiger extremos curris mercator ad Indos, | per mare pauperiem fugiens, per saxa, per ignes (id. Ep. 1, 1, 45). But *tum* (1007) there was honorable poverty, *nunc* (1008) riches drown their possessors. Then (1009) they poisoned themselves unwittingly, *nunc* (1010) they are poisoned by members of their own households. There is, then, in the paragraph 998-1010 a set of parallels between 'then' and 'now', and verse 1006 is in perfect harmony. In the entire epyllion from 783 to the close of the fifth book there are traces of this general comparison that is shown not only in the contrast of *tum* and *nunc*, but also in the opposition of the imperfect and present tenses of the verbs: cf. 790,

797, 802, 803; 811, 813; altogether within the limits of the epyllion *tum* occurs 25 times, *tunc* 4, and *nunc* 16.

But it may be said that, granting the content of the verse, it is not well joined to its context, and that, at any rate, *cum* should be read for *tum*. Now if *cum* were the MS reading no one would be likely to disturb it, for L. is fond of *cum* and *ubi*; in the paragraph 1028-1090 *cum* occurs 13 times and *ubi* 3. But even then some sharp critic would have pointed out the banality of an observation that *when* men were ignorant of navigation the sea could not have tempted them! One is reminded of the Epicurean denial of teleology in Book IV: eyes were not made to see with, but having eyes men saw. Why did primitive man make ships? Was it not because the sea did tempt him to his destruction? Was not the craftiness and tigerish quality of the sea the very thing that deluded him? With just as good ground *cum* could replace *tum* in 990 and in 1273, and in 1398, whereas *cum* in 1038, in 1066-1071, and in 1142 is properly circumstantial and has remained untouched. There is some sense in saying that whelps, when their teeth and claws were hardly grown, even then fought with claws and teeth (1037). The change of *tum* to *cum* then, distinctly weakens the sense.

But is any connective needed? Can this line stand alone according to Lucretian usage? In a question of this kind the personal equation of an editor enters largely as a factor; where one editor places a semicolon another puts a period; but I find in my own edition which, of course, was punctuated without any thought of this problem, that there are 68 one-verse sentences in the poem, distributed as follows: Book I 9 verses, II, 6, III, 11, IV, 16, V, 13, VI, 13. Six of these sentences are entirely unconnected with the context; the remainder I classify as follows as regards the connecting word: pronouns: rel. 9, dem. *is* 3, *hic* 4 = 16; conjunctions and adverbs: *que* 1, *et* 1, *nec* 3, *ve* 3, *igitur* 4, *ergo* 1, *proinde* 2; *itaque* 1, *quare* 1, *sic* 1, *nam* 1, *enim* 6, *nunc* 6, *tum* 1, *praeterea* 1, *etiam* 1, *porro* 2, *usque adeo* 2, *scilicet* 2, *partim* 1, *denique* 2, *vero* 1, total 44; nouns (*nemo*) 1; verb (*linquitur*) 1; total 2; no connective 6; grand total 68. There can be no question, then that a one-sentence verse is Lucretian.

Now as to the connective or lack of connective. If we regard *tum* as the connective we may compare 6, 397 *an tum brachia consuescunt firmantque lacertos*, *tum* there referring to the preceding line *cur etiam loca sola petunt frustra laborant*, just

as in our passage *tum* may refer to *nec poterat pellacia pellicere* in 1004-5. Or compare the verse with any one of the six which have no connective, viz. 3, 787, 955, 956; 4, 119, 122; 5, 131. The comparison will show a looseness of connection not inconsistent with Lucretius' style. But, granting all that, is not the verse superfluous? Here is reached one of the burning questions of Lucretian criticism in which no two people will agree. I have never had the patience to count the number of verses that have been rejected by the editors from the Brixensis to the most recent. Suffice it to say that there is no agreement, for the reason that ejection is dependent on the fundamental principles adopted in the recension. Is the poem complete? Did Cicero edit it carefully? Is Lachmann's theory of interpolation correct? Is the poem to be printed as Lucretius left it or is the modern editor to be his literary executor? And how far shall error of the copyists be presumed? The general tendency of late years has been towards conservatism in the lower criticism. So far as our verse is concerned there is no variation in the MS tradition, and it is difficult to think of the line as a gloss. Why should a copyist have inserted it? It does not contain any parade of learning, nor does it make the sense any more intelligible. As we have seen, it is rather a line that would be put out, rather than put in, by an editor or scribe. Are there any other one-verse sentences that could be spared? 3, 787 *certum ac dispositumst ubi quicquid crescat et insit*, repeated in 5, 131, could be spared without affecting the argument; the entire paragraph is rejected by some in the third book and by others in the fifth. And 4, 122 *nonne vides quam sint subtilia quamque minuta* could also be spared. And 4, 885 *id quod providet illius rei constat imago* Giussani thinks superfluous. 6, 122 *ignis enim sunt haec non venti signa neque imbris* seems hardly necessary for ordinary intelligence—he is referring to the *signa* of lightning and things struck by it—but no one has yet questioned the verse and I should be the last to do so. And 6, 616 *praeterea magnam sol partem detrahit aestu* actually interrupts the narrative and is gratuitous if one would have it so. And the verses within sentences that one or another editor has ejected, what shall we say to them? Lachmann has named several in his note on our verse, viz. 1, 334, 454; 3, 415, 433; 4, 229, all of which he ejects and all of which I regard as genuine, and I am not alone. It is not worth while to name other verses. I maintain that if the verse has good MS

support the burden of proof lies on him who would eject it. I trust I have shown that our verse is not superfluous according to the standard of the later editors. It is no more unnecessary than others that are unquestioned; it does not disturb the sense and it is not inconsistent with the context.

2. The second objection of Suerdsiö and Lachmann is to *improba* which must mean *immane* or *vile* or *scelerosum*, all of which meanings Lachmann would have inapplicable here. Lucretius has *improba* in 3, 1026 and nowhere else. The word, as Kennedy says on Georgic 1, 119, is applied to that which insists and perseveres in doing something wrong or unpleasant. It occurs in the XII Tables, Ennius, and Plautus, and was common in the Jurists; it is found in the prose and poetry of all ages of Roman literature. No word has a better claim to pure Latinity. The hexameter poets, like Lucretius in 3, 1026, prefer to put it in the fifth foot, but Virgil in Georg. 3, 431 has it in the first as in our line here. It is applied to both persons and things, here an epithet of *ratio*. Horace, C. 3, 24, 62, says *improbæ | crescunt divitiæ*, which is not without force for this discussion when we remember the object of navigation. The use of an adjective with *ratio* is Lucretian; he has *vera ratio*, 1, 498, *prava* 4, 520, *falsa* 4, 485; and an objective genitive dependent as well: *vitæ rationes* 1, 105, and particularly 6, 1226 *nec ratio remedi communis certa dabatur*. And if in our verse *improba* belongs in sense with *navigii* rather than with *ratio*, there is a parallel in 1, 81 *inpiæ te rationis inire elementa viamque | indugredi sceleris*. Other cases of this hypallage are 1, 1102 *volucris ritu flammæ*; 3, 308 *naturæ vestigia prima*: I have gathered together several instances in my note on 1, 10. The problem reduces, then, to the question whether the epithet *improbus* may properly be applied to navigation. Lucretius' attitude to the sea and to all connected with it is distinctly unfriendly: 2, 557 *infidi maris insidias virisque dolumque | ut vitare velint, neve ullo tempore credant, | subdola cum ridet placidi pellacia ponti*; note *insidias*, *dolum*, *subdola*, *pellacia*, these alone justify *improba*. The new-born babe, 5, 223, is a *navita proiectus ab undis* in its helplessness, and the close neighborhood of our verse, 5, 1000 to 1005, is full of hostility to the sea. Latin poets continue the sentiment for the Romans as a nation never loved the sea: Virg. Georg. 1, 254 *infidum remis impellere marmor*, Aen. 5, 848 *mene salis placido voltum fluctusque quietos | ignorare iubes? mene huic confidere monstro*;

Prop. 3, 7, 37 *natura insidias pontum substravit avaris* which brings us back to the *improbæ divitiæ* of Horace. So later Seneca, *Medea* 326 *avidus nimirum navita—dedit illa <Argo> graves improba poenas*. Wretched is navigation, and its wretched art was unknown. *Improbus* is that which is not *probus*, what the writer disapproves of, what can not stand his test. It is a purely subjective word. Thus it is said of *panis, arva, mons, labor, hasta, homo, lupus, carmina, spes*, because with all of these things or persons the writer was displeased. Hence a translation in our passage by 'villainous', 'miserable', 'wretched', 'despicable', 'contemptible', 'knavish', 'nefarious', 'vile' would be satisfactory. All that Lucretius means is that he disapproves strongly of the art of sailing ships. I can see, then, no ground for objecting to *improba*. Florus (I, 45, 17) says *improbam classem naufragio castigasset Oceanus*.

3. The third objection is the most serious of all, namely the meaning and form of the word *navigii*. It is denied that it can mean navigation here, and that an uncontracted genitive in *ii* of nouns, can be used by Lucretius. I am aware that a defence of the word is difficult, yet let us see what may be said in its favor.

First, as to the meaning of the word in the sense 'navigation'. Gronovius, as quoted by Suerdsiö, maintained that the first occurrence in this meaning is by Cervidius Scaevola in the Digest XLV 1 leg. 122 § 1 *idque creditum esse in omnes navigii dies ducentos,—ipse in Syriam per navigium proficiscatur—quasi perfecto navigio*. Here *navigii* seems to mean 'voyage', *navigium* 'ship', and *navigio* again 'voyage'.¹ It does not mean navigation in the sense of seamanship, but navigation in the sense of 'the sailing'. Scaevola flourished under M. Aurelius in the second century A. D. and was a contemporary of Fronto, Apuleius, and Gellius. Suerdsiö also refers to Ulpian, Dig. XLIII 12 leg. 1 § 14 *ait Praetor iterve navigio deterius fiat. Hoc pro navigatione positum est; immo navigium solemus dicere etiam ipsam navem—navigii appellatione etiam rates continentur*. This shows that occasionally *navigium* was a synonym of *navigatio*, although ordinarily a synonym of *navis*. Ulpian died in 228. And Justinian's Code (A. D. 529) IV, 33, 3 has *ut post navigium quod in Africam dirigi debitor asseverabat—ut navigii dumtaxat—loco quidem navigii servato, again in the meaning 'course' or 'voyage'*.

¹ The Freuch translation of the Digest (Paris 1805) translates 'tout le temps de la navigation—par mer—ayant finit son voyage'.

In the fourth century the author of the *Orig. Gentis Rom.*, 10, has *taedio longi navigii classem incenderunt*, and the translator of *Dictys Cretensis* 1, 5 *properatione navigii*; 2, 4 *multorum dierum navigio*, 2, 10 *mare navigio patens*; and finally *Rutil. Itin.* 1, 541 (416 A. D.) *tempora navigii clarus reparaverat Eurus*. The evidence then shows no occurrence of *navigium* except as a synonym of *navis*, before the second century, and no real parallel at all to the sense demanded by the Lucretian passage, viz. navigation as an art.

Navigium in our line was an attempt to extend the meaning of a word. Lucretius means 'the art of navigation', not the 'art of ships' or the 'art of voyage' or of a ship's 'course'. What is the Latin word for navigation? *Navigatio* usually means 'voyage', although *Cic. De Off.* 2, 12 may be interpreted of the art of sailing ships, a passage ejected by Beier as a gloss. The English derivative points to a final development of the meaning 'navigation', of which, however *Du Cange* gives no evidence. But *L.* could not use the form *nāvigātio* in the hexameter. *Pliny* uses *ars navalis*; *Statius* (*Th.* 3, 29) and *Lucan* (7, 126) have *arte relicta* where the context shows that *nāvigāndi* is to be supplied; *Caesar* (*BG.* 3, 8) *scientia atque usu rerum nauticarum*, and *Cicero* (*ND.* 2, 152) *nauticarum rerum scientiam*. Lucretius never uses *navalis*, but he has *astrologorum artem* in 5, 728. But there *ars* is used in opposition to *Chaldaeorum doctrina* exceptionally with something of contempt. *Naūticārum rerum* was, of course, excluded by the metre. How then, could he express this abstract idea of navigation?

The word *navigium* occurs in Lucretius in four other places: in 4, 437 and 6, 430 it means ships; in 5, 333 *nunc addita navigiis sunt | multa, modo organici melicos peperere sonores*, it means 'ships' but his real thought is 'now many improvements are being made in navigation', an inadequate expression due to poverty of language; in 5, 1448 *navigia atque agri culturas moenia leges*, it is usually translated 'ships', but it may be an abstract, parallel to *agri culturas*, itself an unique plural to distinguish it from the concrete use of that term in 5, 1367. And our own line admits of a similar interpretation: 'the ship's accursed art', meaning the evil business of navigation. It is, then, unnecessary to press the ordinary meaning of *navigium* here any more than in 5, 333.

But is there any justification for the use of derivatives of *ago* as quasi-abstract terms? *Navigium* is derived from *navigo* and that

from *navis ago*. *Litigium* is a close parallel, meaning 'dispute' in Plautus and 'litigation' in law Latin (Vet. Ic. 7, 1 H.); *remigium* means rowing, boat and crew. *Cogitatio* is both abstract and concrete in Cicero. L. has *servitium* but once (I, 455) and then as an abstract. The comparative absence of abstract terms in the earlier Latinity is well known. Suppose, then, that the word does not mean ship here and that we must wait until the second century to find another case. Is that fatal? The vocabulary of Lucretius has much in common with that of Apuleius, Fronto, the Jurists, and the ecclesiastical writers. The general question has been discussed by Rönsch, *Itala und Vulgata*, at p. 91 and elsewhere, and by Wolff, *De L. vocabulis singularibus*, and to a less degree by Proll, *De formis antiquis L.* Nothing can be more certain than that the Lucretian vocabulary is distinguished by (1) a large number of ἀπαξ λεγόμενα, (2) by a large number of words that are commonly regarded as ante- and post-classic, (3) by many words that are found elsewhere only in post-Augustan Latin. Thus he has in common with Apuleius *fluentem omnimodis interstinguere exos*; with Arnobius *formatura formamentum circumcaesura vocamen maximitas pestilitas differitas mactatus aversabilis*; with Sidonius *oppressus*; with Tertullian *crepitacillum*; with Avienus *primigenus frugiparus*; with Lactantius *dementire*; with Paulinus *haerescere*; with Prudentius *renutare*; and with Plautus and Apuleius *loquaculus*, to give one of many examples. There is, then, nothing un-Lucretian in a use of *navigium* in a sense occurring only in late authors.

Yet it may be said in the case of the words mentioned above the meaning is definite and often technical. If *navigium* means ship four times in L. it ought to mean ship here. Such a charge ought not to count against Lucretius any more than against Cicero, who in his philosophical writings constantly limits and expands the meanings of Latin words in his effort to construct a philosophical vocabulary. In L., to mention a few words among many, *elementa error pondus forma imber ignis vacuum locus omne plaga* occur in technical and also in the ordinary meanings.¹ And in such words as *forma, natura, facere, lacescere*, L., like other authors, does not confine himself to single meanings of such words. Therefore if he wished to use *navigium* in different senses he was justified in so doing. It is consistent with his

¹ Cf. Polle, *Artis vocab. L.*; Staedler, *De Serm. L.*

general practice. The other expressions for 'navigation' are utterly impossible in L. and when not barred by metrical difficulty are inconsistent with his style.

The final objection is to the uncontracted genitive in *ii*. As is well known since Bentley's note on Ter. And. 2, 1, 20 the general principle has been accepted that in substantives, the poets to Propertius use only the single *i*; ¹ recently the rule has been formulated by Bednara, Archiv 14, 339, 'the gen. sing. of nouns in *-ius* or *-ium* up to the time of Catullus is always found in *i*.' Bednara adds in a footnote the best collection of references to the literature on the subject that I know of. Maas, Archiv 12, 509 sq., has the best discussion of the problem so far as it concerns metrical exigency. His canon is 'the single *i* in dactylic poets occurs only when the double *i* is impossible'. In L. there are following cases of contracted *i* in the MSS (OQ): favoni 1, 11, Memmi 1, 42, absinthi 1, 941, 2, 400, centauri 2, 401, dispendi 2, 1127, Aegi 6, 585, incendi 6, 673, pervigili 6, 754. And there are due to emendation and accepted by most editors stilicidi (-ii OQ) 1, 313, absinthi (-ii OQ) 4, 16, bracchi (-ii OQ) 6, 434, conchyli (-ii Q) 6, 1074, remigi (remigio OQ) 6, 743, remedi (-ii OQ) 6, 1226. Every one of these is a forced quantity and seven of the fourteen occur in the sixth book which is least finished. Not one of them is a choriambic word when uncontracted except *remigii*, and editors admit *rēmigi* in 6, 743 only by allowing a shortening in hiatus before an initial vowel in the following word *oblitae*. L. has two cases of uncontracted genitives of adjectives, *patrii* 1, 832; 3, 260 and *medii* 1, 1082, but I am by no means sure that the latter is not a substantive.

The real question at issue here is what poet was the first to write *ii*. Propertius, said Bentley, and no one tries to emend all the instances out of Propertius because he has *imperii*, *ingenii*, *opprobrii*, *gymnasii* and several proper nouns; there are too many to eject. Virgil has *fluvii* in Aen. 3, 702 and *Palladii* in 9, 150; these are explained away or cut out so as not to affect the general question. Then there is Catullus 9, 5 *O nuntii beati* that they will have plural in spite of Prop. 4, 7, 21 and Lucan 2, 45. The matter reduces to numbers merely: one case in an author can be removed by medicine or at the worst by surgery, and Propertius is the first who has the *ii* disease hopelessly. Is it not more reasonable that

¹ Cf. Kühner, Lat. Gram. I p. 284.

at first we should find a single example, rather than many, of a grammatical or metrical variation from a general observance? If, for any reason, the usage is novel or offensive to the writer or to his readers, is it probable that he would extend the usage widely? Rather should we not expect to find some special reason for an unique occurrence? Lucretius has a single instance of elision of an iambic word (4, 741) of course not admitted by Lachmann; he has but one hypermeter (5, 849); he elides final *ū* but twice (1, 677; 3, 49); he has but one verse ending in three spondees (3, 198), also disapproved by Lachmann. And Virgil in the Georgics has but one verse in three spondees (3, 276) and but two in the Aeneid (3, 74; 7, 634). All the editors but Lachmann and Bernays think L. has *oportet* in 1, 778. Some one must have begun to use the uncontracted *ii* just as some author must have been the first to approve the use of a word. The language was growing in Lucretius' time both in vocabulary, word formation and syntax. Probably the analogy between *-ii* in the genitive singular and nominative and vocative plural had been already noted, perhaps by Lucilius and Accius, and very likely it was a matter of popular debate. Lucretius in rapid composition thought he might use it, for how else could he express himself? I challenge any one to express the entire thought of our line without using *navigiū*. I myself have experimented: for instance:

(a) *ars tum navalis ratio caecaeque iacebant*. Here *ars navalis* is used for navigation but the expression, so far as I know, occurs only in Pliny NH. 5, 67. It is hopelessly prosaic. *Improba* is omitted and *caecae* is questionable.

(b) *caeca scientia navalisque ars improba deerant*. Here *scientia* is a word foreign to Lucretius' vocabulary. It is prosaic and mostly Ciceronian. The important *tum* is missing and *deerant* is weaker than *iacebant*.

(c) *improba nautarum ratio tum caeca iacebat*. Lucretius does not know the form *nauta*; his word is *navita* and the expression *nautarum ratio* is not sufficiently definite.

(d) *improba nautica tum ratio atque ars caeca iacebant*. *Ars nautica* of Frontinus and Florus is out of the question, not to mention metrical defects in the verse.

Had then Lucretius any choice other than the use of *navigiū*? Both the first changed to *navigiis* which is printed by Bailey and approved by Cartault, Flexion 17, but Housman, Cl. R. 14, 367, is right in calling the change futile. L. construes *ratio* with the

genitive as I have shown above, and never with the dative; in 6, 535 and 1090 the datives are possessive with substantive verbs. He has nunc addita navigiis sunt | multa in 5, 333 and navigia in 4, 437; 5, 1448; 6, 430. Other writers use navigium, navigio, navigiorum. I find the form *navigii*, in addition to the passages cited above, in Cic. ND. 2, 87, Q. Curt. 4, 7, 24, Dictys Cret. 5, 16; Pliny NH. 13, 70, Suet. Nero 34, Tac. Ann. 14, 5, Ov. M. 11, 561, Sen. Ep. 90, 24, Non. 533, 14; 535, 19; 536, 8. Kühner, Gramm. p. 286, has rightly said that not much reliance can be placed on the evidence of the prose writers in this matter, yet it is worthy of passing remark that with one exception no standard text of any author anywhere prints *navigi*. There are plenty of examples of other cretics: Zielinski¹ in his Clauselgesetz in Cicero's Reden p. 769 has several, but it is not impossible that the form *nāvigi* was distasteful for some reason and was avoided; perhaps there was a tendency to vocalize the *v* and the coalescence of *avi* was feared; so navita became nauta, nāvīcūla, nāucūla; cf. bobus from bovis, aucella from avicella, aetas from aevitas, amasti from amavisti. Naugi from navigi would have been intolerable. Propertius has Lānūvī, but Lāvīni, in each case through metrical necessity; Pliny NH. 35, 17 Lanivi or Lanuvi with MS variants. Perhaps a short *vi* was unable to maintain itself in a cretic word; I have been unable to find any other choriambic word, shortened to a cretic, where *v* is intervocalic in the second syllable. Dīlūvī occurs in Sen. NQ. 3, 27, 1 and elsewhere; diluvi is not cited. Pācūvī and Pācūvī are both given, but also Pacvi (see Georges, Wortformen). Dānūvī and Danubii alone are cited. Naufragium is already contracted, and the genitive uncontracted in *ii* occurs in at least seven authors. There are no Latin words beginning with *naug* but several with *aug*. Nonius, however, p. 60, 10 M. read *naugas* for *nugas* in Plaut. Amph. 626. Ribbeck reads in Accius 488 *obliscar* for *obliviscar*, and in 190 *obliscier*; Fleckeisen, Jahrb. 101, 73 proposed *oblisci* in Plaut. Capt. 985 and *obliscendi* in Miles 1359; in the latter passage Leo follows him. *Mōvimentum* reduces to mōmentum, and pāvītans remained uncontracted. *Navis*, even, is monosyllabic in Plaut. Men. 344 and *navi* probably in Lucil. 483 Marx.

¹ Zielinski's rule for Cicero is 'ordinary substantives have only *-ii*; Roman proper names sometimes *-ii*, sometimes *-i*' (p. 769).

This may be the reason for the avoidance of the form *naviger* that is quoted by Georges, Wortformen, only from Ausonius (Idyll. 3, 26; 10, 27, 367) and from Avienus (Ora Marit. 636).

The single occurrence of *navigi* is in Pliny NH. 13, 70; there Jan, Sillig, and Detlefsen all read *navigi*. Sillig notes *navigio* in MS R. of Pliny; the older editors all read *navigii* and Pliny nowhere else has the genitive singular of the word. I am unable to discover the MS tradition of Pliny except for the Veronensis of which Mone published an apographon in Sillig's Pliny Vol. 6. The Veronensis has *navigi*, but Mone in his description of the codex, p. xxviii, says that it frequently omits a double *i* in the genitive sing. and dative and ablative pl.; thus *folis* for *foliis*. In addition the last letter of a word is frequently omitted (p. xxiii), and repeated (p. xxiv). Hence the evidence of M in this passage should have little weight. There is nothing in the prefaces of Sillig, Jan, and Detlefsen that bears on the orthography of this case form, but some remarks on Plinian orthography were made by Detlefsen in Phil. 28, 310 sq. to the effect that that adopted by Sillig and Jan was arbitrary.

Finally, Munro would retain the verse, emending to *improba naucleri ratio cum caeca iacebat*. *Navarchi* (Cic. Tac.) would be more in Lucretius' style than *naucleri* (Plaut. Mil. 1110) if both were not hopeless because they lay weight on the skipper's competency. Munro was led to retain the line by Manil. 1, 87 et vagus in caecum penetravit navita pontum. As Manilius is known to have studied Lucretius this parallel has some force.

To sum up: I regard the verse in the MS form as genuine. Brieger (Prol.) says of it 'si Lucretius scripsit, hora non fausta scripsit': I would change to 'Lucretius scripsit hora non fausta'; if he had lived to revise his poem his great ability would have enabled him to express his thought in some other manner that would have harmonized better with the linguistic standard of his day.